Description

In this module, students will learn about the healthcare disparities among people with historically excluded identities by reading healthcare articles in groups and developing concept maps both individually and collaboratively.

Learning Goals

Students will have a deeper understanding of the healthcare field by learning about the sources, effects, and solutions for healthcare disparities on marginalized communities.

Students will know how to synthesize and connect concepts related to the sources, effects, and solution of healthcare disparities from primary research.

Learning Objectives

Students will be able to:
- Engage in critical thinking about implicit biases and healthcare inequalities
- Identify sources and/or of healthcare disparities among minoritized identities.
- Identify strategies to reduce healthcare inequalities
- Compare central themes from various research topics
- Synthesize concept maps
- Analyze disproportionate effects of healthcare disparities on intersecting identities

Suggested Courses

Introductory Biology; Health Sciences

Instructor Resources

Tieing It All Together:
Healthcare Disparities among People with Historically Excluded Identities
Project | Module 3: Persisting Biases in STEM

Created by:

Scientific Processing Skills:	Reading research papers, sorting/classifying information, synthesizing information, and communicating information
Pedagogical Approaches:	Active Learning, Inclusive Teaching, Concept Mapping, Think-Pair-Share, Brainstorming, Collaborative Work
Bloom's Cognitive Levels:	Understanding, Application, and Analysis
Principles of How People Learn:	Motivates students to learn material, reveals prior knowledge, predominantly students doing work, real-world relevant topics,
Vision and Change Competencies:	Ability to understand the relationship between science and society, interdisciplinary nature of science
Core Biological	Systems

Implementation Guide

Activity	Description	Est Time	Notes
Preparation for Class			
Read Selected Articles and Concept Map Introduction	Student in groups are assigned an article to read and draw a drafted concept map based on the reading. Additionally, they will watch videos and read about concept mapping.	> 2 hours	
Class Session I			
Introductory Lecture	Review healthcare inequalities and connect to prior knowledge throughout	> 15 mins	Powerpoint included
Collaborative Work: Concept Mapping	Have students break into groups for concept mapping	>20 mins	Electronically or with paper/pencil
Full Class Discussion & Wrap-up	Dissolve groups; share concepts and develop central themes/ideas that surround the idea of healthcare inequalities.	>20 mins	Electronically or with paper/pencil

Student Assessment

1. Describe the activity. What was the issue you learned about?
2. What did this activity teach you about the relationship between biology and society?
3. How did the activity illustrate how human values influence science?
4. What are the different perspectives presented as part of the activity today?
5. How do your personal values or experiences relate to the themes presented in this activity, if at all? Has the activity impacted your personal values or views?
6. Did the activity make you think differently about the issue than before today's activity? How?
7. What are some causes of the healthcare disparities you learned about today?
8. What are some effects of the healthcare disparities you learned about today?
9. What are some solutions to the healthcare disparities you learned about today?

Adaptations

Alternative Assessments/Extensions:
- Have students submit a proposal outlining a plan of action for a solution to a particular healthcare disparity supported by the literature reviewed in class
- Have students submit their concept maps and graded according to a rubric
- Have student reflect or discuss the following questions:
    - What were 3 main themes that all of the research topics on healthcare disparities had in common?
    - Describe the relationship between the cause, effect, and solution for a particular health disparity you learned about today.
    - Describe a solution for a specific healthcare disparity you learned about today and discuss how it will impact the cause and effect for that healthcare disparity.
    - Describe the intersectional (considering multiple aspects of one's identity)effects of a particular healthcare disparity.

Additional Resources

Healthcare Disparities Articles:

Socioeconomic Disparity Focal Papers
Baumer Y, Farmer N, Premeaux TA, Wallen GR and Powell-Wiley TM (2020) Health Disparities in COVID-19: Addressing the Role of Social Determinants of Health in Immune System Dysfunction to Turn the Tide. Front. Public Health 8:559312. doi: 10.3389/fpubh.2020.559312

Racial Disparity Focal Papers
Oribhabor G I, Nelson M L, Buchanan-Peart K R, et al. (July 15, 2020) A Mother's Cry: A Race to Eliminate the Influence of Racial Disparities on Maternal Morbidity and Mortality Rates Among Black Women in America. Cureus 12(7): e9207. DOI 10.7759/cureus.9207

Chambers, BD, Arabia, SE, Arega, HA, et al. Exposures to structural racism and racial discrimination among pregnant and early post-partum Black women living in Oakland, California. Stress Health. 2020; 36: 213– 219. https://doi.org/10.1002/smi.2922

Yaya S, Yeboah H, Charles CH, et al
Ethnic and racial disparities in COVID-19-related deaths: counting the trees, hiding the forest
BMJ Global Health 2020;5:e002913.

Braun L. Race, ethnicity and lung function: A brief history. Can J Respir Ther. 2015;51(4):99-101. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4631137/

LBGQT+ Disparity Focal Papers
Shanna K. Kattari, N. Eugene Walls, Darren L. Whitfield & Lisa Langenderfer- Magruder (2015) Racial and Ethnic Differences in Experiences of Discrimination in Accessing Health Services Among Transgender People in the United States, International Journal of Transgenderism, 16:2, 68-79, DOI: 10.1080/15532739.2015.1064336

Becky McKay (2011) Lesbian, Gay, Bisexual, and Transgender Health Issues, Disparities, and Information Resources, Medical Reference Services Quarterly, 30:4, 393-401, DOI: 10.1080/02763869.2011.608971

Voisin, D. R., Bird, J. D. P., Shiu, C.-S., & Krieger, C. (2013). "It's crazy being a Black, gay youth." Getting information about HIV prevention: A pilot study. *Journal of Adolescence*, *36*(1), 111–119. https://doi.org/10.1016/j.adolescence.2012.09.009

Melendez, R. M., & Pinto, R. M. (2009). HIV prevention and primary care for transgender women in a COMMUNITY-BASED CLINIC. *Journal of the Association of Nurses in AIDS Care*, *20*(5), 387–397. https://doi.org/10.1016/j.jana.2009.06.002

Additional Resources

Concept Map Resources:

Sites for free concept mapping
MindMup- https://www.mindmup.com
Lucid Chart- https://www.lucidchart.com/pages/examples/concept-map-maker
Google Jamboard- https://jamboard.google.com/
Google Draw- https://docs.google.com/drawings/
Excalidraw- https://excalidraw.com/

Explanation of concept mapping
https://www.kent.edu/ctl/concept-maps

Sample rubrics to assess concept maps:
https://teach.its.uiowa.edu/sites/teach.its.uiowa.edu/files/docs/docs/Concept_Map_Rubrics_ed.pdf
https://www.nps.gov/grsm/learn/education/classrooms/upload/Concept-Map-Scoring-Rubric.pdf

Site for more info on Health and Healthcare disparities
https://www.kff.org/racial-equity-and-health-policy/issue-brief/disparities-in-health-and-health-care-5-key-question-and-answers/

Pre-course work: Become Familiar with Concept Mapping!

Please look through all of the links provided below in order to familiarize yourself with concept maps and how to properly produce this particular map.

1. Visit this webpage and watch the tutorial on completing concept maps: https://www.youtube.com/watch?v=8XGQGhli0I0
2. Visit the following links for more detailed written directions on concept mapping, as well as a guide on an alternative program "**cMAP**". https://www.evidencebasedteaching.org.au/concept-mapping-complete-guide/
3. Choose a platform to create your map. The above YouTube video uses a free web-based platform "**Lucid**". You are welcome to do that. Additionally, you may draw it by hand, or use one of the other following programs:
ClickCharts Diagram & Flowchart Software and **Gliffy** are web-based products that include built in templates to help you get started.
Visual Understanding Environment is a free open source software that you can download to your personal computer.
cMAP from the Florida Institute for Human and Machine Cognition (IHMC).
Microsoft Office products have many templates for displaying relationships and processes, The SmartArt feature is built into the Insert tab within Microsoft Word and PowerPoint that you can use to create your concept map
4. Check out this paper detailing the importance and usefulness of concept mapping as a learning tool. The author provides advice on using concept maps in regards to structure, feedback, exam alignment, and learning styles and study habits.
Reference: Weimer, M. (2015, January 20). Keeping students on board with concept maps. Faculty Focus. Retrieved from: http://www.facultyfocus.com/articles/instructional-design/keepingstudents-board-concept-maps/

Essential Reminders
Tips and tricks:
1. Use arrows to explain the connections between your key terms
2. Don't forget to show the interconnectivity of topics. Remember to show how concepts relate to each other. This is not a flow chart and should not be entirely linear. If you need to, look up additional information on the differences between flow charts and concept maps.
3. Touch on as many topics as possible- including specifics. Start with your main topics (genetics, anatomy, physiology, ecology, evolution, cells, the nature of science, etc.) and continue to build on those main topics to include more detailed explanations. For example, if you were concept mapping genetics, you may want to detail trait dominance, inheritance, Mendel, Punnett squares, pea plants, etc.). The connect inheritance to pea plants with the connection term explaining that pea plants were "experimented on" to learn about inheritance.
4. We want to know what you know, not what google knows. Each one of you will turn in a vastly different concept map, and that is okay! Do not panic about catching every little detail, just be a thorough as possible. This is open-note in the sense that you may use your notes , each other, and your textbook. Do not use the internet. This assessment is made to help you draw connections, and internet searches will not help you do that. We are very familiar with the results from such google searches, and we expect you to go beyond what can be found through such a search.
6. Be creative! Make jumps… don't get stuck on "my book doesn't say this". You will need to take the knowledge gained throughout the semester to draw new connections with the world around you. Those connections won't always be found in your text, and we do not expect citations. You will need to think critically, and outside the scope of information given to you explicitly in order to complete this assignment.

**Piecing it All Together:
Healthcare Disparities among People with
Historically Excluded Identities**

Introduction:
In the healthcare field, we apply what we know about biology to serving a variety of people to the benefit of their health. However, the quality of services and perspectives of practitioners have not always been equitable across identity groups. In this lesson, you will learn about the sources of these inequities, the disproportionate impacts on different identity groups, and the possible solutions for addressing the disparities.

Introductory Lecture:
As you are introduced to the topic of healthcare disparities, what are some things that you already knew and what new things did you learn?

What I Know	What I've Learned

Piecing It All Together: Healthcare Disparities among People with Historically Excluded Identities

Name: Date:

Article Reading and Concept Map:
You will be assigned in groups to read a primary research article about healthcare disparities among people with excluded identities. While reading the article consider the following questions:
- What are the sources/causes of the healthcare disparities?
- What are the effects/impacts of the healthcare disparities?
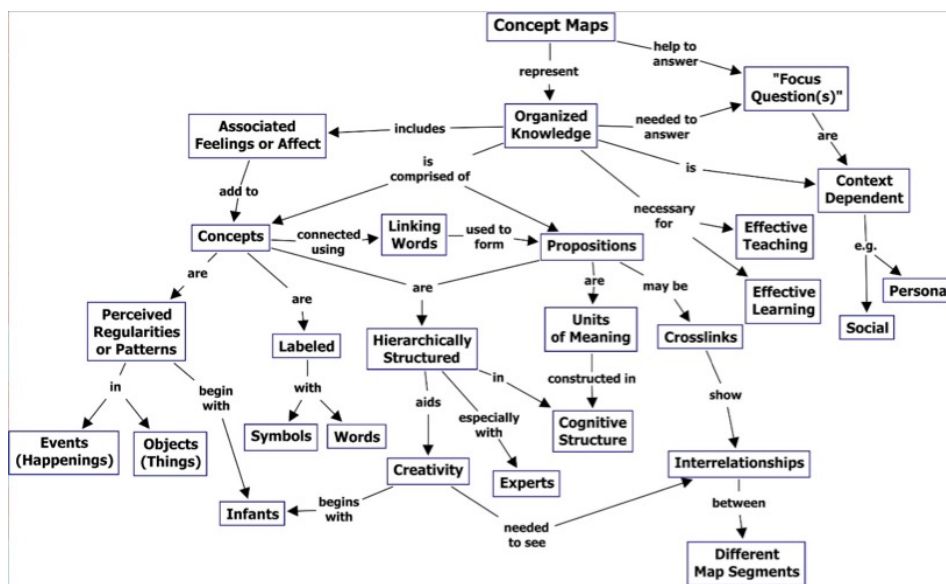- What are the strategies to reduce the healthcare disparities?

Once you are finished reading your article and reflecting on the questions above, you will create a concept map. You will share this concept map with your group mates in the following class session. This concept map can be created electronically or using paper and pencil.

Example Concept Map:
A concept map is a visual representation of relationships between topics. It is made of two main components: concepts and relationships.
- Concepts- Any major topics/findings/information from your article in circles or boxes
- Relationships- Concepts should be connected to one another with lines that are labeled with the relationship

There can be multiple relationships between concepts, showing the interconnectivity of ideas. See the example below:

Electronic Concept Maps Resources:

MindMup-
https://www.mindmup.com
Lucid Chart-
https://www.lucidchart.com/pages/examples/concept-map-maker
Google Jamboard-
https://jamboard.google.com/
Google Draw-
https://docs.google.com/drawings/
Excalidraw-
https://excalidraw.com/

Piecing It All Together: Healthcare Disparities among People with Historically Excluded Identities

Name: Date:

Group Concept Map:

In your article groups, you will synthesize your individual concept maps.

- Collaborate effectively by having <u>each member of the group contribute at least one concept or relationship</u>. You can do this by 'sharing in a circle' to ensure equity in voice.
- This concept map can be created electronically or using paper and pencil.

Full Class Discussion:

As a group you will share your concept map and connect your ideas to a larger class concept map.

When it is your group's turn share information that directly comes from your article:

- New concepts to add to the class's model from your article/concept map
- New relationships between concepts from your article/concept map
- Add any new concepts or lines between **existing** concepts for new relationships.

You can use the space below to record the class concept map or take notes if you need to.

Piecing It All Together: Healthcare Disparities among People with Historically Excluded Identities

Name: Date:

1. Describe the activity. What was the issue you learned about?

2. What did this activity teach you about the relationship between biology and society?

3. How did the activity illustrate how human values influence science?

4. What are the different perspectives presented as part of the activity today?

5. How do your personal values or experiences relate to the themes presented in this activity, if at all? Has the activity impacted your personal values or views?

6. Did the activity make you think differently about the issue than before today's activity? How?

7. What are some causes of the healthcare disparities you learned about today?

8. What are some effects of the healthcare disparities you learned about today?

9. What are some solutions to the healthcare disparities you learned about today?